

2001 NH Youth Risk Behavior Survey (YRBS) Aggregate School-Wide Report

I. Introduction

This report presents a summary and analysis of the data gathered from the 33 NH high schools that participated in the school-wide administration of the YRBS. In 2001, there were two different ways in which the YRBS could be administered to New Hampshire high school students. Some schools participated in the CDC administered YRBS, which only sampled individual classes from participating schools. The results from this CDC survey will be released by the Department of Education this January. For information on the CDC YRBS, please contact: Virginia St. Martin (vstmartin@ed.state.nh.us).

The school-wide administration of the YRBS, described in this report, was sponsored by an agreement between the NH State Incentive Grant, and the NH Departments of Health and Human Services and Education. In the summer of 2001, a series of individual school reports were distributed to provide the participating schools with current data about health risk behaviors in their specific school populations.

By combining the 16,664 survey responses of all the participating 9th-12th grade high school students who participated in the school-wide YRBS, we generated a state report that provides in depth information about the current health risk behaviors of NH high school students.

This state report looks at prevalence and patterns of youth substance use. The report also assesses relationships between alcohol, tobacco, marijuana, other drug use and health problems such as depression, suicidality or participation in unsafe sex. It is in two parts. Part I shows statewide percentile differences, by grade and gender, in responses to the YRBS questions on substance use, abuse and related risk behaviors. Part II uses statistical analysis to examine a number of issues relating to substance use. We have developed composite indices of substance use that provide general risk behavior profiles of students who use and do not use substances. We have examined differences in health risk behavior based on type and amount of drug use (for example, between those youth who report use of tobacco, alcohol, marijuana and cocaine).

This report was compiled by the State Evaluation Team for the NH State Incentive Program, Division of Alcohol and Drug Abuse Prevention and Recovery, NH Department of Health and Human Services. For further information, contact:

- Stanley Rosenberg, Ph.D., 603 448-0126 (Stanley.Rosenberg@Dartmouth.edu)
- Kay Jankowski, Ph.D., 603 643-7416 (Kay.Jankowski@Dartmouth.edu) or
- Harriet Rosenberg, M.A., 603 643-7416 (Harriet.Rosenberg@Dartmouth.edu).

II. Background Information

Reliability and Validity of the Findings: The survey was voluntary and anonymous so as to encourage honest disclosure by the students. Consistency checks were run on the data to exclude careless, invalid or logically inconsistent answers. Self-report data tends to underestimate the behaviors surveyed and can only be completely validated by cross-checking answers with objective procedures, such as drug screens or school records, which was not possible to do.

Several other possible sources of error remain that would suggest caution in interpreting the findings of this report. Although the statewide student participation rate was quite high (71%), participation rates varied by grade within schools and across schools. Also, the survey provides no information about the students who have dropped out of high school, and who might be at equal or higher risk for unhealthy behaviors.

While the participating high schools were geographically distributed across New Hampshire and included urban, rural, large and small student bodies, schools were not selected by a statistically driven representative sampling technique. This is a limitation on the generalizability of the results. Also, since the school-wide YRBS is based only on cross-sectional data, representing a snapshot of patterns of behavior at a given moment of time, it is difficult to use the results to establish or support trends.

Caution is also advised in terms of using the findings comparatively. Previous NH YRBS administrations, including the current 2001 CDC administered YRBS, have not been school-wide (surveying a total of approximately 2000 NH high school students each time) and have not always met statistical criteria for representative samples of NH students. This limits how generalizable their results can be for all NH teens. If the next scheduled YRBS in 2003 is administered on a school-wide basis, as this one was, this current report would provide a baseline for establishing trend data on health-risk behaviors in NH youth.

We believe that this 2001 school-wide YRBS report can be thought of as providing good indicators of current health risk behaviors among NH high school students. General comparisons can be made with other NH surveys such as TAP, data from the national 2001 YRBS or other national youth surveys. However, the survey cannot answer the following important questions: what are the causes of the reported health risk behaviors that might lead to youth injury, disease or death and what are the most effective prevention interventions available? Remember to look on the positive side. There is a large percent of NH high school students who are NOT engaging in significant levels of health risk behaviors. Hopefully, the analyses from this report can be used to help target specific problem areas and youth who are at particularly high risk and in need of services.

Description of Participating Schools			
Gender	Grade*	Participation Rate	Race/Ethnicity*
	4890 9 th graders	(70% of 9 th graders)	88% White
51% girls	4609 10 th graders	(75% of 10 th graders)	2% African-American
49% boys	3789 11 th graders	(75% of 11 th graders)	2% Hispanic
	3212 12 th graders	(67% of 12 th graders)	3% Asian-American
			3% Native American
	*164 no grade reported		*2% missing data

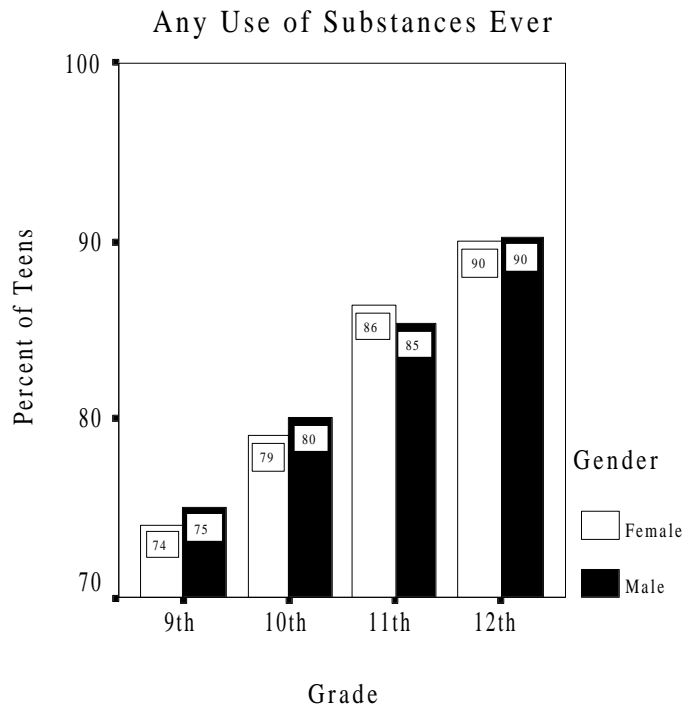
The findings are presented as graphs and by descriptive text. All results are expressed as percentages of students who endorsed the reported responses. Because of rounding, not all the percentages add up to exactly 100%. Many of the findings are organized by gender and grade. In Part I of this report, wherever percentile differences between boys and girls, or between high school grades, are noted, these differences are statistically significant. Statistically significant means that there are fewer than 5 chances out of 100 that the differences could be due to random factors.

Part I

I. General Substance Use

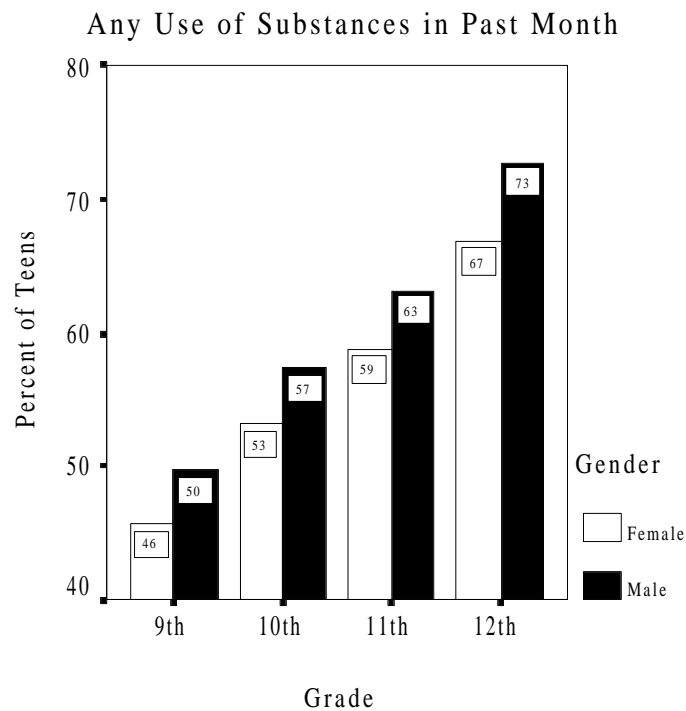
Any Use of Substances Ever

- 81% of teens report use of tobacco, alcohol, marijuana or other drugs at some point in their lifetime
- Boys and girls report equal amounts of lifetime use of substances
- Lifetime use of substances increases by grade in high school
 - 74% of 9th graders
 - 79% of 10th graders
 - 86% of 11th graders
 - 90% of 12th graders



Any Use of Substances in the Past Month
(tobacco, alcohol and marijuana only)

- 58% of teens report use in the past month
- More boys (**60%**) than girls (**55%**) report use in the past month
- Use of substances in the past month increases by grade in high school
 - 48% of 9th graders
 - 55% of 10th graders
 - 62% of 11th graders
 - 70% of 12th graders



II. Alcohol Use

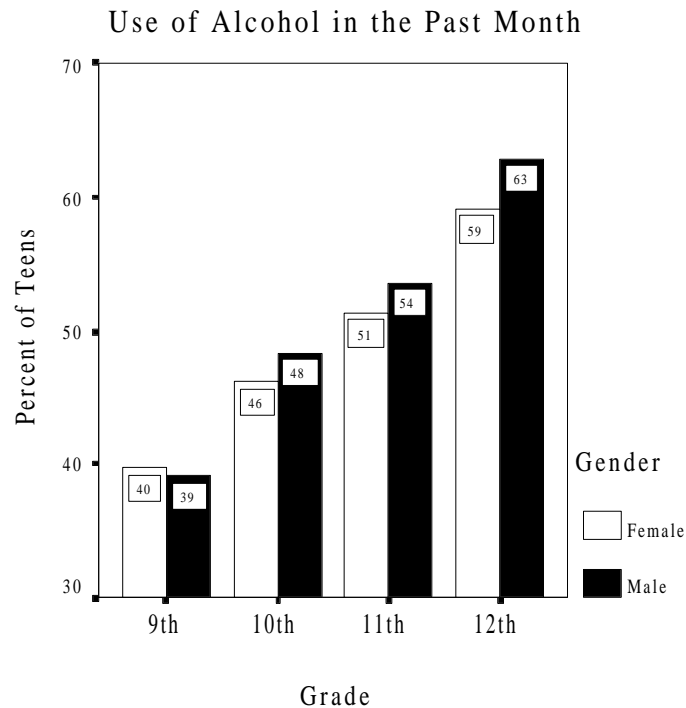
Use of Alcohol Ever

- 77% of teens report use of alcohol at least once in their lifetime
- Equal numbers of boys and girls report lifetime use of alcohol
- Use of alcohol increases by high school grade. With each increase in year in high school, teens are more likely to have used alcohol at least once.
 - 68% of 9th graders
 - 75% of 10th graders
 - 82% of 11th graders
 - 87% of 12th graders



Use of Alcohol in the Past Month

- 49% of teens report drinking alcohol at least once during the past month
- Equal numbers of boys and girls report drinking alcohol within the past month
- Ninth graders are least likely and 12th graders are most likely to report drinking alcohol in the past month
 - 39% of 9th graders
 - 47% of 10th graders
 - 54% of 11th graders
 - 61% of 12th graders
- 6% report drinking alcohol on school property in the past month



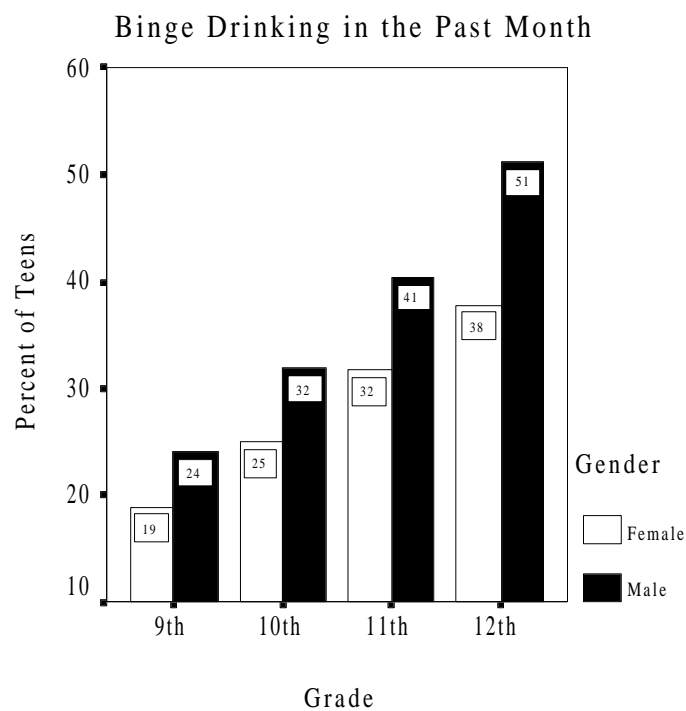
Age at Initial Use

- Among those teens who report having used alcohol:
 - 34% report initial use at age 12 or younger
 - 37% report initial use between ages 13-14
 - 26% report initial use between ages 15-16
 - 4% report initial use at age 17 or older
- Boys report using alcohol at an earlier age than girls



Binge Drinking in the Past Month

- 31% of teens report drinking greater than five drinks at a time in the past month
- More boys (**35%**) than girls (**27%**) report binge drinking in the past month
- Binge drinking increases with each grade in high school
 - 21% of 9th graders
 - 28% of 10th graders
 - 36% of 11th graders
 - 45% of 12th graders



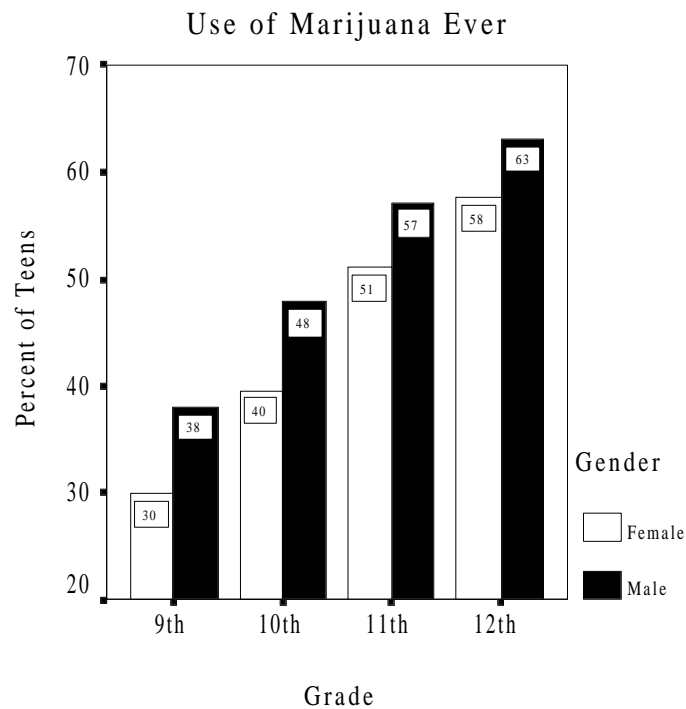
Other Alcohol Related Information

- 27% of teens report having ridden in a vehicle driven by someone who had been drinking alcohol in the past month
- 12% of teens report driving a vehicle when they had been drinking alcohol in the past month
- Teens who reported lifetime or past month alcohol use are less likely than teens who did not report using alcohol:
 - to believe that drinking and using drugs is harmful or wrong
 - to believe that their parents and other adults in their neighborhood think it is wrong for them to use substances
- Teens who reported lifetime or past month alcohol use are more likely than teens who did not report using alcohol:
 - to know adults who use and/or deal drugs
 - to perceive easy access to drugs and alcohol

III. Marijuana Use

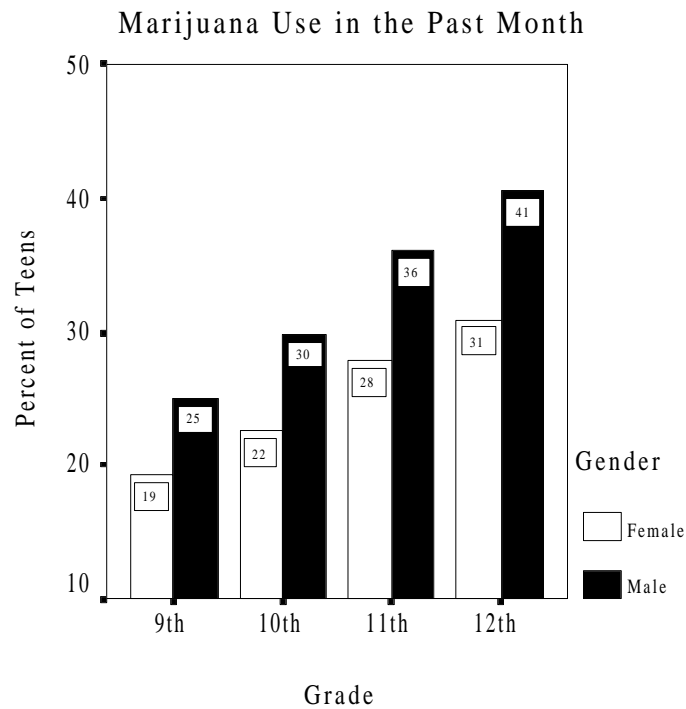
Use of Marijuana Ever

- 46% of teens report using marijuana at least once in their lifetime
- More boys (**50%**) than girls (**42%**) report having used marijuana at least once in their lifetime
- Marijuana use increases with each grade in high school
 - 33% for 9th graders
 - 43% for 10th graders
 - 54% for 11th graders
 - 60% for 12th graders



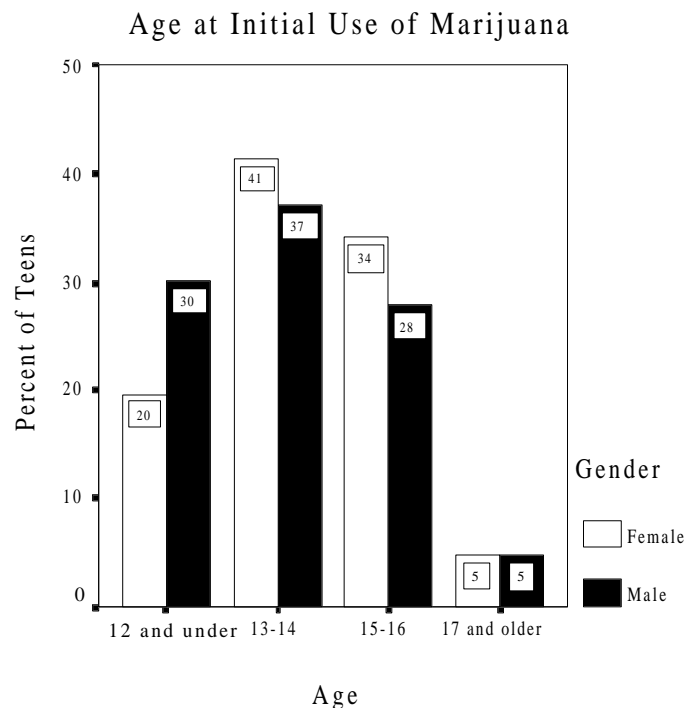
Marijuana Use in the Past Month

- 28% of teens report using marijuana in the past month
- More boys (**32%**) than girls (**24%**) report marijuana use during the past month
- Current marijuana use increases with each grade in high school
 - 21% of 9th graders
 - 26% of 10th graders
 - 31% of 11th graders
 - 35% of 12th graders
- 7% report using marijuana on school property in the past month



Age at Initial Use

- Among those teens who report having used marijuana:
 - 25% report initial use at age 12 or younger
 - 40% report initial use between ages 13-14
 - 30% report initial use between ages 15-16
 - 5% report initial use at age 17 or older
- Boys report using marijuana at an earlier age than girls



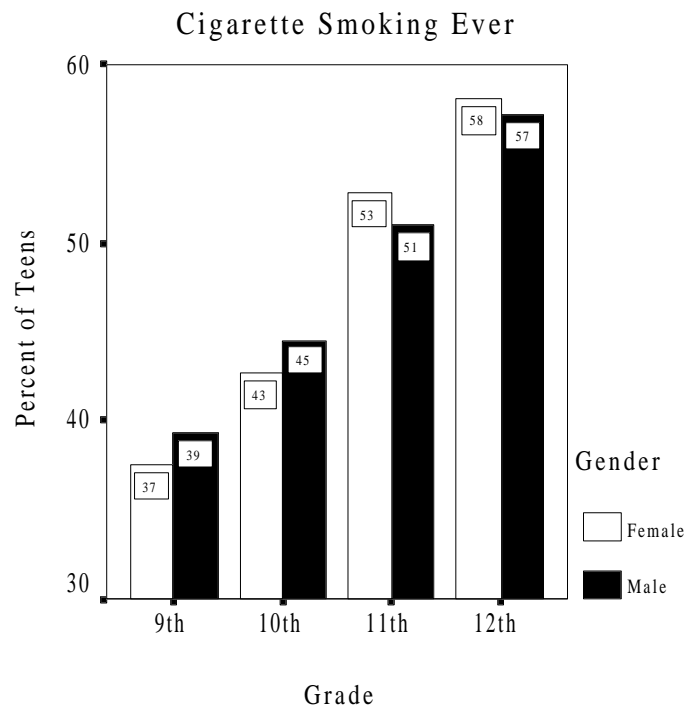
Other Marijuana Related Information

- Teens who reported lifetime or past month marijuana use are less likely than teens who did not report using marijuana:
 - to believe that drinking and using drugs is harmful or wrong
 - to believe that their parents and other adults in their neighborhood think it is wrong for them to use substances
- Teens who reported lifetime or past month marijuana use are more likely than teens who did not report using marijuana:
 - to know adults who use and/or deal drugs
 - to perceive easy access to drugs and alcohol

IV. Tobacco Use

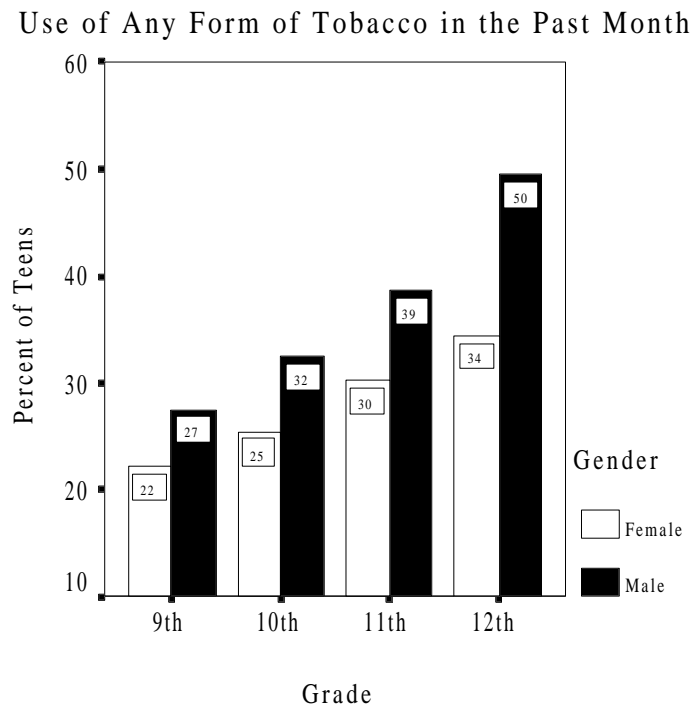
Cigarette Smoking Ever

- 47% of teens report having ever smoked a whole cigarette
- Boys and girls report no difference in having ever smoked cigarettes
- 11th and 12th graders are more likely to have ever smoked cigarettes than 9th and 10th graders
 - 37% of 9th graders
 - 43% of 10th graders
 - 52% of 11th graders
 - 58% of 12th graders
- 22% report having smoked cigarettes daily for at least a 30 day period at some point in their lifetime
- 18% report having attempted to quit smoking cigarettes in the past year



Use of Any Form of Tobacco in the Past Month

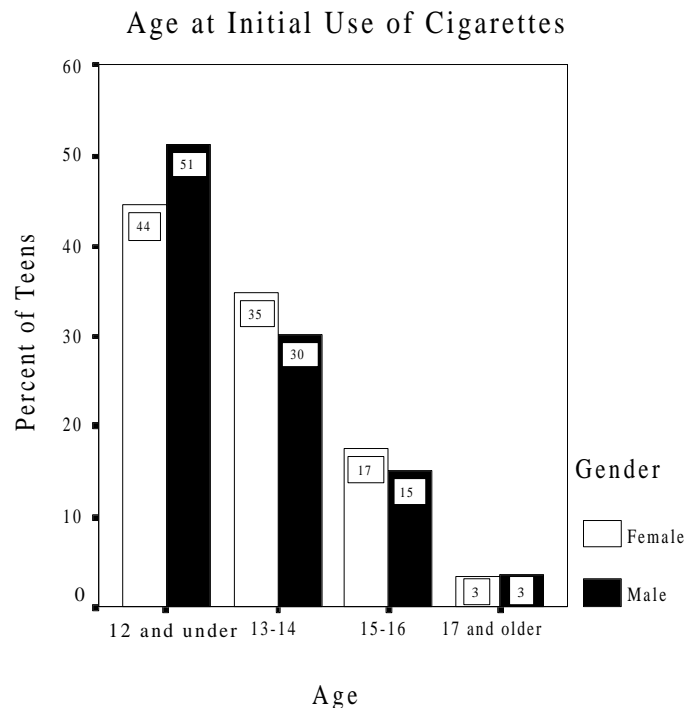
- 31% of teens report smoking cigarettes, cigars, or chewing tobacco at least once during the past month
- Boys (**35%**) are more likely than girls (**27%**) to have used tobacco in the past month
- 11th and 12th graders are more likely to have used tobacco in the past month than 9th and 10th graders
 - 24% of 9th graders
 - 28% of 10th graders
 - 34% of 11th graders
 - 42% of 12th graders
- 11% report smoking cigarettes on school property in the past month



Age at Initial Use of Cigarette Smoking

Among those teens who report having smoked cigarettes:

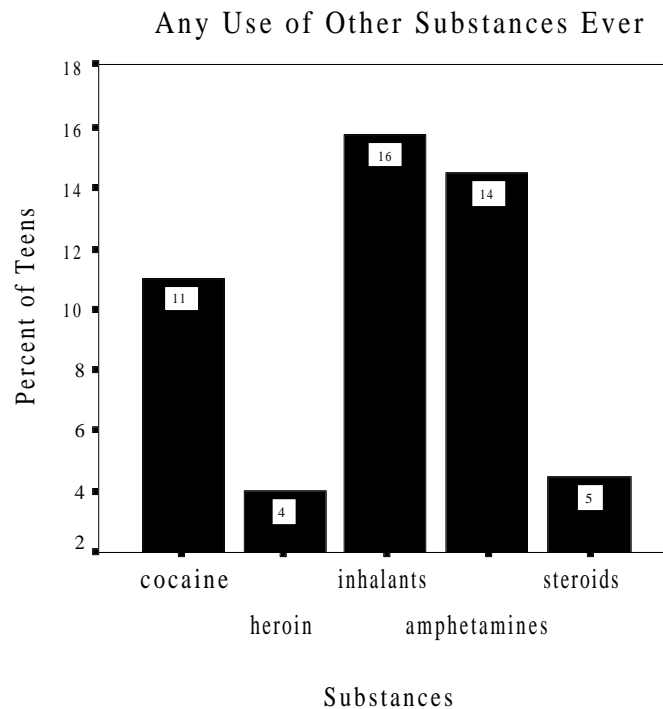
- 48% report initial use at 12 or younger
 - 33% report initial use between ages 13-14
 - 16% report initial use between ages 15-16
 - 3% report initial use at age 17 or older
- Boys report smoking cigarettes at an earlier age than girls



Other Tobacco Related Information

- Of those teens who did smoke in the past month:
 - 25% bought cigarettes in a store
 - 1% bought cigarettes in a vending machine
 - 31% gave someone money to buy cigarettes
 - 23% borrowed cigarettes from someone else
 - 6% had an adult gave cigarettes to them
 - 6% stole them
 - 7% got them some other way
- Of those who bought cigarettes in the past month, 53% were asked to show proof of age

V. Lifetime Use of Substances Other Than Tobacco, Alcohol or Marijuana (Cocaine, Heroin, Inhalants, Amphetamines, and Steroids)



- Of these substances, inhalants are the most commonly used
- 3% of teens report ever injecting illegal substances
- 26% of teens report use of at least one of the above listed substances at some point in their lives
- Boys (**28%**) are more likely than girls (**25%**) to report use of at least one of these substances
- There are slight differences by grade in reported use of at least one of these substances; 12th graders are most likely to have used any of these substances in their lifetime
 - 25% of 9th graders
 - 24% of 10th graders
 - 26% of 11th graders
 - 29% of 12th graders

Additional Information Related to Other Substances

- Teens who reported injecting drugs or use of drugs such as cocaine, amphetamines, heroin, inhalants and steroids are less likely than teens who did not report using these drugs:
 - to believe that drinking and using drugs is harmful or wrong
 - to believe that their parents and other adults in their neighborhood think it is wrong for them to use substances
- Teens who reported use of these drugs are more likely than teens who did not report using these drugs:
 - to know adults who use and/or deal drugs
 - to perceive easy access to drugs and alcohol

VI. Risk for Clinical Alcohol Use Disorders

The survey includes a screen for clinical alcohol use disorders, including alcohol abuse and alcohol dependence. When a teen scores positive on this screen, a thorough assessment by a mental health professional would be recommended. Alcohol use disorders are maladaptive patterns of alcohol use leading to clinically significant impairment or distress. Alcohol abuse can result in problems at home, school, or with peers. Alcohol dependence is the more severe disorder. Teens with alcohol dependence might also exhibit signs of physiological dependence on alcohol, such as increased tolerance, withdrawal symptoms and persistent, unsuccessful efforts to cut down or control alcohol use.

- 10% of teens screened positive for having an alcohol use disorder
- Boys (**12%**) are more likely than girls (**8%**) to screen positive for an alcohol use disorder
- Risk for alcohol use disorder is higher in 11th and 12th graders than in 9th and 10th graders
 - 7% of 9th graders
 - 9% of 10th graders
 - 11% of 11th graders
 - 13% of 12th graders

VII. Other Information and Risk Behavior Related to Substance Use

- 33% of teens report being offered, sold, or given an illegal drug on school property in the past year

Use by Friends

- 57% of teens report use of illicit drugs (marijuana and other drugs) by at least one of their 4 closest friends in the past year
- 20% report that all of their 4 closest friends use illicit drugs
- 12th graders more than 9th graders report that they believe their close friends use illicit drugs
 - 15% of 9th graders report use by their 4 closest friends
 - 26% of 12th graders report use by their 4 closest friends
- Boys (**23%**) more than girls (**17%**) believe their close friends use illicit drugs

Other Risk Behavior

Violence

- 15% of teens report carrying a weapon such as a gun, knife or club on at least one occasion in the past month
- 8% of teens report carrying a weapon on school property in the past month
- 7% of teens felt threatened or were injured by use of a weapon on school property in the past month
- 6% were absent from school in the past month because they felt unsafe at school
- 27% of teens report being in a physical fight at least once in the past year; 4% report having been injured as a result
- 13% report being hit, slapped, or physically hurt by a boyfriend or girlfriend in the past 12 months
- 9% report having been the victim of sexual assault

Emotional Problems

- 28% report feeling sad or hopeless for two weeks or more over the past year
- 20% report having seriously considered suicide
- 15% report having attempted suicide one or more times in the past 12 months

Weight and Body Image

- 21% of teens report problems with their weight or body image such as describing themselves as very overweight, taking diet pills, or vomiting to lose weight
- Girls (**28%**) are more likely than boys (**14%**) to have problems with their weight or body image

Sexual Behavior

- 40% report having ever had sexual intercourse
- Equal numbers of boys and girls report having had sexual intercourse
- Of those who report having had sexual intercourse:
 - 12% report first having intercourse at age 12 or younger
 - 10% report first having intercourse at age 13
 - 20% report first having intercourse at age 14
 - 25% report first having intercourse at age 15
 - 22% report first having intercourse at age 16
 - 12% report first having intercourse at age 17 or older
- Boys are more likely than girls to report earlier age when first had sexual intercourse
- Of those who report having had sexual intercourse:
 - 45% report having had 1 partner
 - 20% report having had 2 partners
 - 11% report having had 3 partners
 - 7% report having had 4 partners
 - 5% report having had 5 partners
 - 14% report having had 6 or more partners
- Boys are more likely than girls to report a greater number of sexual partners
- Of those who report having had sexual intercourse, 25% report having used drugs or alcohol prior to having had sex the last time
- Of those who report having had sexual intercourse, 60% report having used a condom the last time they had sexual intercourse
- Of those who report having had sexual intercourse, the following methods of birth control were used:
 - 25% used birth control pills
 - 48% used condoms
 - 4% used depo-provera (injectable birth control)
 - 8% used withdrawal
 - 2% used some other method
 - 12% did not use any method
 - 3% not sure
- 4% of teens report having been pregnant or having gotten someone else pregnant
- 88% report being taught about AIDS in school

Part II

Associations between amount and type of substance use, academic performance, and health risk behaviors

I. Introduction

The second part of this report looks at how youth substance use relates to health risk behaviors and harmful outcomes such as: engagement in violence, sexual risk taking, sexual assault, depression, weight and body image problems and lower academic performance,. We were interested in comparing these health risks for teens who report using substances and for those who do not. For this purpose, we created a series of indices that allowed us, by the use of odds ratios, to see the associations of substance use with risky behaviors. The odds ratio estimates the comparative odds of engaging in health risk behaviors by teens who use substances and teens who do not use substances. We examined separately: reported use of alcohol, tobacco, marijuana and hard drugs. For reported tobacco use, marijuana use and use of hard drugs, the index simply compared users to nonusers (including lifetime or 30 day use). But because we found on this survey that 77% of NH youth reported using alcohol, the alcohol use index contains an Alcohol Severity Scale. This scale divides reported alcohol use into 4 levels of use: no use, light use, moderate use and heavy use.

In the following table and text, we present our analysis from the YRBS data of how substance use and abuse are associated with the health and well-being of NH teens. Because this analysis is based only on cross-sectional data, representing a snapshot of patterns of behavior at the time the survey was administered, it is not possible to state that a certain behavior leads to or causes another. For example, while we can say that marijuana use may be related to engagement in violent behavior, we cannot assume from this survey that marijuana use leads to or causes violent behavior. It might be that violent behavior leads to or causes marijuana use. **It is very important to understand that the associations we describe below are correlational, which means that no causal inferences may be made.**

Section A provides a more detailed description of the indices. It lists the YRBS questions that were used to create each index and the health risk behaviors included in the following table. Section B presents the table of odds ratios.

Section A

1. Depressive Mood and Substance Use

A Depressive Mood Index was created containing 4 items: (1) depressed mood (2) thoughts of suicide, (3) a plan for suicide and (5) a reported suicide attempt within the past year (Questions 22-25). Teens who endorsed one or more of these 4 questions were categorized as having a depressed mood and teens who endorsed none of these questions were categorized as not having a depressed mood. It is important to note that this Index is not a measure of symptoms of depression. To receive a clinical diagnosis of depression, multiple symptoms would need to be endorsed, many of which this survey did not include.

• 42% of teens (36% of boys and 47% of girls) measured as having a depressed mood using the Index criteria

Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to report having a depressed mood than those who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

2. Sexual Risk Behavior and Substance Use

A Sexual Risk Behavior Index was created containing 7 items including: age at first intercourse, number of sexual partners, use of contraception, ever having been pregnant or having gotten someone pregnant and substance use before intercourse (Questions 76-82). Teens who endorsed risky behavior on one or more of these 7 questions were categorized as having engaged in risky sexual behavior.

• 38% of teens (39% of boys and 37% of girls) engaged in sexual risk behavior using the Index criteria

For both boys and girls, sexual risk behavior was associated with substance use. Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to engage in risky sexual behavior than teens who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs. Forty percent of youth report ever having sexual intercourse, equal numbers of boys and girls.

3. Violence and Substance Use

An Engagement in Violence Index was created containing 6 items including carrying weapons such as guns, knives or clubs and engaging in physical fights (Questions 12-14, 17-19). Teens who reported one or more of these 6 items were categorized as having engaged in violent behavior.

• 36% of teens (49% of boys and 24% of girls) were categorized as engaging in violence using the Index criteria

Boys are about twice as likely as girls to engage in violent behavior. For both boys and girls, violent behavior was associated with substance use. Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to engage in violent behavior than teens who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

4. Sexual Assault and Substance Use

- **9% of teens (7% of boys and 11% of girls) report being sexually assaulted**

Higher levels of alcohol, tobacco, and marijuana use and use of hard drugs are associated with increased risk for being the victim of sexual assault in childhood or adolescence. Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to report having been victims of sexual assault at least once in their lifetime than teens who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

5. Weight and Body Image Problems and Substance Use

A Weight and Body Problems Index was created containing 4 items: (1) fasting for 24 hours or more, (2) taking diet pills without a doctor's recommendation, (3) being very overweight, or (4) engaging in purging behaviors (Questions 83,87-89). Teens who reported one or more of these 4 items were categorized as having a weight or body image problem.

- **21% of teens (14% of boys and 28% of girls) were categorized as having weight and body image problems using the Index criteria**

Girls were more likely to report having weight and body image problems than boys. For both boys and girls, weight and body image problems were associated with substance use. Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs were more likely to have weight and body image problems than teens who reported drinking less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

6. Attempted Suicide and Substance Use

- **15% of teens (14% of boys and 16% of girls) report attempting suicide one or more times during the past year**

Higher levels of alcohol, tobacco, and marijuana use and use of hard drugs are associated with increased risk for attempting suicide. Teens who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to report attempting suicide at least once within the past year than teens who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

7. Academic Performance and Substance Use

Academic performance was measured by dividing teens into those who reported receiving mostly As or Bs and those who reported receiving mostly Cs or lower. Studies have shown that teens who get higher grades in school are less likely to abuse substances. Higher level of alcohol use, tobacco use, use of marijuana and hard drugs are associated with poorer academic performance.

• 70% of students report mostly grades of A or B

Both boys and girls who drink more heavily, or use tobacco, marijuana or other illicit drugs are more likely to report receiving lower academic grades (mostly Cs or lower) over the past year than teens who drink less or none at all, or who don't use tobacco, marijuana or other illicit drugs.

Section B

Table 1. This table displays odds ratios for the associations between different types of substance use and health risk behaviors. The first column lists the substances that were reported on this survey as being used by some teens (alcohol, tobacco, marijuana and other substances). It also shows the percent of teens who report using the listed substances (alcohol, tobacco, marijuana and "other" substances. "Other substances" refer to: inhalants, amphetamines, cocaine, heroin and steroids.

If you look across the table at the health risk behaviors listed in columns 2 through 7 (depression, sexual risk taking, violence, sexual assault, weight/body image problems, suicide attempts and lower academic performance), you can see the increased likelihood that a teen who reported using one of the substances listed would also report these negative outcomes. For each substance listed, the odds of a teen reporting the health risk behaviors listed are the odds compared to a teen who does not use the specific substance.

These odds ratios are adjusted for gender and grade level, which means that they take account of differences in risk according to gender and grade in school. However, the odds ratios for specific health risk behaviors shown in the table may not be exactly the same for girls as for boys and the table cannot show the exact risk level for an individual teen. While the odds ratios in this table show strong associations between reported substance use and reported health risk behaviors, the data cannot tell us the direction of the association. In other words, we cannot tell if reported use of marijuana preceded reported lower academic performance or whether lower academic performance preceded reported use of marijuana.

Table 1. Increased likelihood of health risk behaviors associated with substance use.

<u>Substance Use Type and Percent of Teens Using Substances</u>	Depressive Mood	Sexual Risk Taking	Violence	Sexual Assault	Weight and Body Image Problems	Suicide Attempts	Lower Academic Performance
Alcohol Use							
Light (28%)	1.6	3.1	2.2	2.1	1.6	1.4	1.8
Moderate (21%)	2.3	7.4	4.0	3.7	2.6	2.1	2.8
Heavy (23%)	3.3	14.1	6.9	6.8	4.3	2.6	4.0
Tobacco Use (50%)	2.2	5.2	3.3	3.6	2.7	2.0	3.4
Marijuana Use (47%)	2.2	6.4	3.0	3.5	2.3	2.0	3.2
Other Substance Use (26%)	2.9	4.9	4.2	4.2	3.2	2.5	2.8